

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>S 3551</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/SE 2004/001473</b>	International filing date ( <i>day/month/year</i> ) <b>14 October 2004</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>7 November 2003</b>
Applicant <b>Alfa Laval Corporate AB et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II)

3. ☐ Unity of invention is lacking (see Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 2

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/001473

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: B04B 1/08, B04B 11/02, B04B 11/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: B04B, B01D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5186708 A (KLAUS STROUCKEN ET AL), 16 February 1993 (16.02.1993), column 1, line 5 - line 30, figures 1,2, claims 1-18, abstract --	1-18
A	DT 2710415 A1 (VEB KOMBINAT IMPULSA BETRIEB VEB), 13 October 1977 (13.10.1977), figures 1,2, claims 1-4 --	1-18
A	US 5362292 A (LEONARD BORGSTRÖM ET AL), 8 November 1994 (08.11.1994), column 3, line 46 - line 48, figures 1-3, claims 1-15, abstract --	1-18

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

2 February 2005

Date of mailing of the international search report

17 -02- 2005

Name and mailing address of the ISA/

Swedish Patent Office

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/001473

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3990631 A (WALLACE J. SCHALL), 9 November 1976 (09.11.1976), column 2, line 60 - line 66; column 4, line 36 - line 41, figure 1, claims 1-10, abstract --	1-18
A	US 5052996 A (CHRISTER LANTZ), 1 October 1991 (01.10.1991), column 4, line 21 - line 41, figures 1,5, abstract --	1-18
A	US 5720705 A (CLAES INGE ET AL), 24 February 1998 (24.02.1998), column 3, line 41 - line 51, figure 1, claims 1-3, abstract -----	1-18

## INTERNATIONAL SEARCH REPORT

Information on patent family members

31/12/2004

International application No.

PCT/SE 2004/001473

US	5186708	A	16/02/1993	CA	2045611	A,C	28/05/1991
				DE	69002614	D,T	18/11/1993
				DK	455780	T	22/11/1993
				EP	0455780	A,B	13/11/1991
				ES	2045955	T	16/01/1994
				JP	3004352	B	31/01/2000
				JP	4505125	T	10/09/1992
				KR	154876	B	16/11/1998
				SE	465018	B,C	15/07/1991
				SE	8903988	A	28/05/1991
				WO	9108054	A	13/06/1991

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				CN	1028612	B	31/05/1995
				CN	1055307	A	16/10/1991
				DE	69103356	D,T	01/12/1994
				EP	0468028	A,B	29/01/1992
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				JP	3004353	B	31/01/2000
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				SE	0390895	T3	
				JP	2894762	B	24/05/1999
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Information on patent family members

31/12/2004

International application No.

PCT/SE 2004/001473

US	5720705	A	24/02/1998	AT	175593	T	15/01/1999
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				AU	4507089	A	28/05/1990
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				CN	1024905	B	08/06/1994
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				DE	68928908	D,T	10/06/1999
				EP	0534943	A,B	07/04/1993
				JP	2959575	B	06/10/1999
				JP	4501678	T	26/03/1992
				KR	136369	B	25/04/1998
				SE	462262	B,C	28/05/1990
				SE	8804029	A	08/11/1988
				US	5733239	A	31/03/1998
				WO	9005028	A	17/05/1990
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